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Erik J. Overberger
FAY, SHARPE, FAGAN, MINNICH & McKEE, LLP
1100 SUPERIOR AVENUE, SEVENTH FLOOR
CLEVELAND, OH 44114-2579

EXAMINER	
MORRISON, THOMAS A	

ART UNIT	PAPER NUMBER
3653	

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/753,606	FRAZIER ET AL.	
	Examiner	Art Unit	
	Thomas A. Morrison	3653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,10-17 and 20* is/are rejected.

7)☐ Claim(s) *8,9,18 and 19* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 July 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *01/08/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 5, 6 and 11-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 5 and its dependent claim 6, these claims recite "said at least one bearing recess has an opening width", and later recite "a diameter of said at least one flexible bearing to be selectively variable along a first axis aligned with an opening width of said at least one bearing recess". It is unclear if the initially recited opening width of the bearing recess is the same or different from the opening width of the bearing recess recited later in the claims.

Claim 11 recites the limitation "pick module" in line 7. There is insufficient antecedent basis for this limitation in the claim.

Claim 12 recites the limitation "said pick frame" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Also, regarding claim 12 and its dependent claims 13 and 14, it is unclear what is meant by the recited "semi-engaged" position.

Also, with regard to claim 13, there is insufficient structure recited in this claim to understand how the at least one flexible bearing has both an adjustable diameter and a constant diameter, depending on the position of the pick module assembly.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Independent claim 17 is rejected under 35 U.S.C. 102(b) as being anticipated by Watson et al. In particular, the Watson et al. patent discloses all of the limitations of claim 17. Watson et al. discloses a customer replaceable unit (2) for a sheet feeder for feeding cut sheets from a stack of sheets, comprising:

a frame (18);

a first roller (4) rotatably mounted to the frame (18),

a second roller (6) rotatably mounted to the frame (18) adjacent the first roller (4) and connected to the first roller (40) for rotation therewith so that rotation of the first roller (4) causes simultaneous rotation of the second roller (6), and

a pair of flexible connecting members (32 and 34) connected to the frame (18) for selectively and removably connecting the frame (18) to an associated sheet feeder frame (40), the pair of flexible connecting members (32 and 34) each flexible along a first axis (e.g., spread apart as shown in Fig. 4) thereof for connection to the associated sheet feeder frame (40) and relatively inflexible along a second axis (e.g., thickness of 32 and 34) thereof for locking to the associated sheet feeder frame (40) when connected thereto.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-4, 15, 16 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watson et al. in view of Amano. In particular, Watson et al. in view of Amano meets all of the limitations of claims 1-4, 15, 16 and 20.

Regarding independent claim 1, Figures 1-7 of Watson et al. show a sheet feeder and separator assembly (including 2 and 40) for separating and sequentially feeding individual print media sheets from a stack thereof (column 2, lines 50-55), comprising:

a frame (40) having at least one bearing recess (60 and/or 68),

a print media tray that is movable (column 1, lines 10-14, column 2, lines 50-55 and Fig. 1),

a separator (13) connected to the print media tray (column 2, lines 50-55 and Fig. 1);

a pick module assembly (2) removably connected to the frame (40) adjacent the the print media tray (column 3, lines 37-50, column 2, lines 50-55 and Figs. 1 and 6) , the pick module assembly (2) including a pick roller (4) adjacent the separator (13) to form a nip (column 2, lines 50-55 and Fig. 1) and at least one flexible bearing (including 35 and 38) removably received in the at least one bearing recess (60 and/or 68) to removably connect the pick module assembly (2) to the frame (40). As mentioned

above, Watson et al. discloses a print media tray that is movable and has a separator connected thereto, Watson et al. does not specifically disclose a removable print media tray.

Amano discloses that it is well known to provide a sheet feeder and separator assembly for separating and sequentially feeding individual print media sheets from a stack (Abstract and Fig. 7) with a print media tray (3) that includes a separator (49) and is a cassette (i.e., is a removable print media tray) so that it can be removed and filled with sheets. It would have been obvious to one of ordinary skill in the art at the time of the invention, to provide the Watson et al. sheet feeder and separator assembly with a removable tray so that sheets can be added, as shown in Amano.

Regarding dependent claim 2, Watson et al. discloses that the at least one flexible bearing (including 35 and 38) has a variable first dimension along a first axis (moves in direction F) for allowing removal of the at least one flexible bearing (including 35 and 38) from the at least one bearing recess (60 and/or 68) when the first dimension is aligned with an opening width of the at least one bearing recess (60 and/or 68) and has a substantially constant second dimension (e.g., diameter) along a second axis angularly offset (e.g., perpendicular) relative to the first axis for preventing removal of the at least one flexible bearing (including 35 and 38) from the at least one bearing recess (60 and/or 68) when the second dimension is aligned with the opening width. See, e.g., snap fit of 35 with drive shaft set forth in column 4, lines 10-15 and claim 2.

Regarding dependent claim 3, Fig. 2 of Watson et al. shows that the second axis (e.g., the diameter) is approximately normal to the first axis.

Regarding dependent claim 4, Watson et al discloses that the at least one flexible bearing (including 35 and 38) fixes the position of the pick module assembly (2) along the second axis relative to the frame (40) when the second dimension (e.g., the diameter) is aligned with the opening width.

Regarding dependent claim 15, Amano shows that it is well known to provide a sheet feeder and separator assembly with a separator that is a retard roller assembly (including 49) removably connected to a print media tray (column 4, lines 34-39) for replacement thereof, the retard roller assembly (including 49) including a retard roller (49) and a bias means (17) urging the retard roller (49) into the pick roller. It would have been obvious to one of ordinary skill in the art at the time of the invention, to provide the Watson et al. apparatus with a removable retard roller assembly that has a biasing means, in order to provide a constant urging pressure on the feed roller, as taught by Amano.

Regarding dependent claim 16, Watson et al. shows that the separator (13) is a separator pad.

Regarding independent claim 20, Amano discloses a sheet feeder-separator assembly, comprising:

a frame (including 3),

a retard roller (49) rotatably connected to the frame (including 3),

a replaceable pick assembly (including 8) having a pick roller (8) rotatably connected adjacent the retard roller (49) to form a sheet retard nip for retarding sheets

other than a select sheet being fed between the retard roller and the pick roller from a stack of sheets, and

connectors, but Amano does not specifically disclose connecting members as claimed.

Watson et al. discloses that it is well known to provide a replaceable pick assembly (2) in a sheet feeder-separator assembly (including 40) with connectors (32 and 34) on one of the frame and the replaceable pick assembly (2) for removably engaging recesses (near 64 and near 62) in the other of a frame (40) and the replaceable pick assembly, the connecting members (32 and 34) flexible in a first direction (spread apart as shown in Fig. 4) allowing removal from the recesses (near 64 and near 62) when the first direction is parallel to opening widths of the recesses (near 64 and near 62) and rigid in a second direction (e.g., thickness of 32 and 34) approximately normal to the first direction preventing removal from the recesses (near 64 and near 62) when the second direction is parallel to the opening widths of the recesses (near 64 and near 62).

4. Claims 1, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amano in view of Westcott et al. In particular, Amano in view of Westcott et al. meets all of the limitations of claims 1-4, 15, 16 and 20.

Regarding independent claim 1, Figures 6 and 7 of Amano show a sheet feeder and separator assembly (1) for separating and sequentially feeding individual print media sheets from a stack thereof (see also column 2, lines 47-62), comprising:

a frame (1) having at least one bearing recess (near 7),

a removable print media tray (3) carried by the frame (1),

a separator (including 49) connected to the removable print media tray (3);

a pick module assembly (including 8) with portions removably connected and adjacent the removable print media tray (3), in which the pick module assembly (including 8) includes a pick roller (8) adjacent the separator (including 49) to form a nip, but Amano does not specifically show that the pick module assembly is removably connected to the frame (1).

Wescott et al. discloses that it is well known to provide a sheet feeder and separator assembly (including 14 and 12) with a pick module assembly (14) removably connected to a frame (12), in which the pick module assembly (14) includes a pick roller (22) adjacent a separator (26) to form a nip and at least one flexible bearing (including 72) removably received in at least one bearing recess (34) to removably connect the pick module assembly (14) to the frame (12). It would have been obvious to one of ordinary skill in the art at the time of the invention, to provide the Amano sheet feeder and separator assembly with a pick module assembly removably connected to a frame, to facilitate easy removal and servicing, as taught by Westcott et al.

Regarding dependent claim 15, Amano shows that the separator is a retard roller assembly (including 49) removably connected to the print media tray (column 4, lines 34-39) for replacement thereof, the retard roller assembly (including 49) including a retard roller (49) and a bias means (17) urging the retard roller (49) into the pick roller.

Regarding dependent claim 16, Amano shows that the separator is an active retard roller (49). In particular, retard roller (49) is spring biased and configured to move.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watson et al. in view of Amano as applied to claim 1 above, and further in view of Westcott et al. Watson et al. in view of Amano meets all of the limitations of dependent claim 7, except for the rotation limitations of the pick roller.

Watson et al. discloses a pick frame (18); and a pick roller shaft (8) rotatably mounted to the pick frame (18) by the at least one flexible bearing (including 35 and 38) and having the pick roller (4) connected to the pick roller shaft, the pick roller (4) rotatably fixed to the pick roller shaft (8) when the pick roller shaft (8) is rotated in a first direction, but Watson et al. does not specifically disclose that the pick roller (4) is rotatable relative to the pick roller shaft when the pick roller shaft is rotated in a second direction.

Westcott et al. discloses that it is well known to provide a sheet feeder and separator assembly (2) with a pick roller (62) rotatably fixed (via a one-way bearing 66) to a pick roller shaft (24) when the pick roller shaft (24) is rotated in a first direction and the pick roller (62) rotatable relative to the pick roller shaft (24) when the pick roller shaft (24) is rotated in a second direction, to allow a transport to pull sheets out of the sheet feeder and separator assembly at a faster rate without damaging the sheets. See, e.g., column 5, lines 50-61. It would have been obvious to one of ordinary skill in the art at

the time of the invention, to configure the Watson et al. apparatus such that the pick roller (4) is rotatably fixed to the pick roller shaft when the pick roller shaft is rotated in a first direction and the pick roller is rotatable relative to the pick roller shaft when the pick roller shaft is rotated in a second direction, in order to avoid damaging sheets conveyed through the Watson et al. apparatus, as taught by Westcott et al.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watson et al. in view of Amano, and further in view of Westcott et al. as applied to claim 7 above, and further in view of Inoue et al. The combination of Watson et al., Amano and Westcott et al. discloses all of the limitations of dependent claim 10, except for frictional roller treads as claimed.

Inoue et al. disclose that it is well known to provide rollers (e.g., roller 44) with frictional roller treads (46, 55 and 56) nonrotatably mounted thereto to better feed sheets. It would have been obvious to one of ordinary skill in the art at the time of the invention, to provide the pick roller and the nudger roller of the combination of Watson et al., Amano and Westcott et al. with friction roller treads in order to better feed sheets, as shown by Inoue et al.

Allowable Subject Matter

7. Claims 8, 9, 18 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas A. Morrison whose telephone number is 703-305-0554. The examiner can normally be reached on M-F, 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Walsh can be reached on 703-306-4173. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DONALD P. WALSH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600